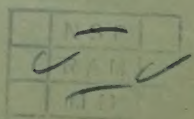


WEST AFRICAN
MAIZE RESEARCH UNIT

Trial Report 1957



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August, 1959

Moor Plantation
IBADAN, Nigeria

WEST AFRICAN
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Trial Report 1957

PRINTED AT
THE STARLIGHT PRESS
P. O. BOX 577, IBADAN

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1. INTRODUCTION

This Trial Report is merely a statement of the figures obtained from trials, carried out in the course of the Unit's programme. All trials are part of one or other of the Unit's projects, which are discussed in the annual reports. Only a few comments on the figures are given in Chapter 4.

A list of the trials, conducted within W.A.M.R.U.'s programme, follows these introductory notes. The results are presented in the form of tables in which the varieties are ranked according to their yielding performance. The yields were calculated to a moisture content of 12% and given in pounds per acre. Where possible the coefficient of variation and the least significant difference at a probability level of 5% are given.

Where observations were made on the incidence of rust and leaf blights, the average scoring is given in the relevant columns. The incidence of rust was assessed on a quantitative scale with values from 0 to 4 (Stanton and Cammack, 1954) while that of leaf blights was assessed as the percentage of attacked leaf area (Cammack 1954).

In a number of centres observations were made on the time to maturity. However the assessment of tasselling time (50% anthesis) seems to give more accurate figures for the assessment of maturity, than estimations based on ear appearance. The tasselling time or maturity time is indicated in days. The relation of tasselling time and maturity time at Ibadan is understudy (Anon. 1958, van Eijnatten 1956).

1. INTRODUCTION

This Trial Report is merely a statement of the facts observed from 1957 to 1958 and is not a review of the Unit's programme. All trials are part of the overall work of the Unit which are discussed in the annual reports. Only a few comments on the trials are given in Chapter 4.

A list of the trials conducted under W.A.M.R.U.'s programme follows these introductory notes. The trials have been arranged in the form of tables in which the varieties are listed according to their field performance. The yields were obtained in a randomised block of 12% and given in pounds per acre. Where possible the coefficient of variation and the test significant difference at a probability level of 5% are given.

Where observations were made on the incidence of rust the average number of lesions per leaf is given. The incidence of rust was recorded in a randomised block with values from 0 to 4 (0 = none and 4 = severe). The incidence of leaf blight was recorded in the percentage of leaves affected (see Appendix 1957).

The number of insects observed was made on the basis of 100 plants. However the number of leafhoppers (50%) and beetles (50%) were to give more exact figures for the assessment of damage. The number of insects per plant is given. The number of leafhoppers and beetles is indicated in brackets. The number of leafhoppers and beetles is indicated in brackets. (Aron 1957 and 1958).

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2. LIST OF TRIALS

TABLE 1. LOCATION OF TRIAL CENTRES AND TRIAL REFERENCE NUMBERS.

REFERENCE NO.	LOCATION	LONGITUDE	LATITUDE
57-1- 1 *	Porto Novo	2° 22'E	6° 29'N
57-1- 2 *	Porto Novo	2° 22'E	6° 29'N
57-1- 3 *	Porto Novo	2° 22'E	6° 29'N
57-1- 4	Abak	7° 47'E	4° 58'N
57-1- 5	Nkwelle	6° 51'E	6° 11'N
57-1- 6	Umudike	7° 32'E	5° 29'N
57-1- 7	Ilorin	4° 32'E	8° 31'N
57-1- 8	Mokwa	5° 03'E	9° 19'N
57-1- 9	Samaru	7° 33'E	11° 12'N
57-1-10	Yandev	9° 00'E	7° 23'N
57-1-11	Ado Ekiti	5° 14'E	7° 38'N
57-1-12	Agege	3° 20'E	6° 38'N
57-1-13	Akure	5° 12'E	7° 15'N
57-1-14	Effurun	5° 47'E	5° 35'N
57-1-15	Ilaro	3° 02'E	6° 55'N
57-1-16	Ilora	3° 50'E	7° 48'N
57-1-17	Irrua	6° 13'E	6° 44'N
57-1-18	Oshogbo	4° 34'E	7° 46'N
57-1-19	Ibadan	3° 54'E	7° 23'N
57-1-20	Kumba	9° 25'E	4° 38'N
57-1-21	Kumbo	10° 40'E	6° 13'N
57-1-22	Ado Ekiti	5° 14'E	7° 38'N
57-1-23	Agege	3° 20'E	6° 38'N
57-1-24	Akure	5° 12'E	7° 15'N
57-1-25	Effurun	5° 47'E	5° 35'N
57-1-26	Ilaro	3° 02'E	6° 55'N
57-1-27	Ilora	3° 50'E	7° 48'N
57-1-28	Irrua	6° 13'E	6° 44'N
57-1-29	Oshogbo	4° 34'E	7° 46'N
57-1-30	Ilorin	4° 32'E	8° 31'N
57-1-31	Nkwelle	6° 51'E	6° 11'N
57-1-32	Ibadan	3° 54'E	7° 23'N
57-2- 1	Umudike	7° 32'E	5° 29'N
57-2- 2	Benin	5° 38'E	6° 20'N
57-2- 3	Ibadan	3° 54'E	7° 23'N
57-2- 4	Ilora	3° 50'E	7° 48'N
57-2- 5 *	Kumba	9° 25'E	4° 38'N
57-2- 6	Kumbo	10° 40'E	6° 13'N
57-2- 7	Agege	3° 20'E	6° 38'N
57-2- 8	Ibadan	3° 54'E	7° 23'N
57-2- 9	Ilora	3° 50'E	7° 48'N
57-2-10	Ilora	3° 50'E	7° 48'N
57-2-11	Agege	3° 20'E	6° 38'N
57-2-12	Ilora	3° 50'E	7° 48'N
57-2-13	Ibadan	3° 54'E	7° 23'N
57-3- 1	Ilora	3° 50'E	7° 48'N
57-3- 2	Ibadan	3° 54'E	7° 23'N
57-5- 1	Ibadan	3° 54'E	7° 23'N

* The trials marked with an asterisk failed completely or had to be abandoned.

3. RESULTS

TABLE 2

TRIAL REFERENCE: 57-1-4 ABAK
6 REPLICATED RANDOMISED BLOCK
COOPERATIVE TRIAL.

RANK	PROGENY	VARIETY	YIELD
1	5515	Trinidad Bulk	1744
2	5519	3-way cross	1589
3	5517	Tsolo	1509
4	5514	Sicaragua	1453
5	5521	Br. 149 Trinidad	1413
6	5513	Mexico 7	1404
7	5512	Mexico 5	1380
8	5518	White Tuxpan	1231
9	5516	Haiti Bulk	1149
10	—	Local	1113
11	5520	Florida Bulk	1066
12	5511	Mexico 1	881

Yields in LB per acre
Coefficient of variation : 27.2%
L.S.D. 5% 410 LB/acre.

TABLE 3

TRIAL REFERENCE: 57-1-5 NKWELLE
6 REPLICATED RANDOMISED BLOCK
COOPERATIVE TRIAL.

RANK	PROGENY	VARIETY	YIELD
1	5515	Trinidad Bulk	2712
2	5519	3-way cross	2611
3	5516	Haiti Bulk	2358
4	5523	EAfro 250	2248
5	5517	Tsolo	2071
6	5518	White Tuxpan	1741
7	5512	Mexico 5	1695
8	5514	Sicaragua	1630
9	5511	Mexico 1	1604
10	5522	Mexico 13	1586
11	5513	Mexico 7	1522
12	—	Local	1388

Yields in LB per acre
Coefficient of variation: 18.5%
L.S.D. 5%: 407 LB/acre.

TABLE 4

TRIAL REFERENCE: 57-1-6 UMUDIKE
6 REPLICATED RANDOMISED BLOCK
COOPERATIVE TRIAL.

RANK	PROGENY	VARIETY	YIELD
1	5515	Trinidad Bulk	1485
2	5514	Sicaragua	1276
3	5519	3-way cross	1199
4	5520	Florida Bulk	1169
5	5517	Tsolo	1168
6	5516	Haiti Bulk	1168
7	5512	Mexico 5	1139
8	5518	White Tuxpan	1130
9	5521	Br. 149 Trinidad	1067
10	5513	Mexico 7	980
11	—	Local	979
12	5511	Mexico 1	833

Yields in LB per acre

Coefficient of variation: 25.7%

Differences between treatments not significant.

TABLE 5

TRIAL REFERENCE: 57-1-7 ILORIN
6 REPLICATED RANDOMISED BLOCK
COOPERATIVE TRIAL.

RANK	PROGENY	VARIETY	YIELD	RUST	TASSELLING TIME
1	5514	Sicaragua	1836	1.0	57
2	5512	Mexico 5	1702	0.8	63
3	5513	Mexico 7	1669	0.8	63
4	5516	Haiti Bulk	1543	0.8	63
5	5511	Mexico 1	1459	0.9	63
6	5518	White Tuxpan	1389	1.0	63
7	5519	3-way cross	1373	0.9	—
8	5517	Tsolo	1358	0.8	57
9	5525	Chariga	1348	0.9	50
10	5515	Trinidad Bulk	1347	0.8	57
11	—	Local	1197	0.9	58
12	5524	Bongo	1459	0.9	44

Yields in LB per acre

Coefficient of variation: 19.3%

L.S.D. 5%: 312 LB per acre.

TABLE 6

TRIAL REFERENCE: 57-1-8 MOKWA
6 REPLICATED RANDOMISED BLOCK
COOPERATIVE TRIAL.

RANK	PROGENY	VARIETY	YIELD	TASSELLING TIME
1	5519	3-way cross	1202	61
2	5515	Trinidad Bulk	1190	66
3	5514	Sicaragua	1090	60
4	5517	Tsolo	1083	58
5	5518	White Tuxpan	1055	59
6	5511	Mexico 1	1033	63
7	5513	Mexico 7	943	60
8	5512	Mexico 5	926	61
9	—	Local	914	58
10	5525	Chariga	673	51
11	5516	Haiti Bulk	574	64
12	5524	Bongo	426	51

Yields in LB per acre
Coefficient of variation: 20.7%
L.S.D. 5% 218 LB per acre.

TABLE 7

TRIAL REFERENCE: 57-1-9 SAMARU
6 REPLICATED RANDOMISED BLOCK
COOPERATIVE TRIAL.

RANK	PROGENY	VARIETY	YIELD
1	5524	Bongo	689
2	5519	3-way cross	507
3	5525	Chariga	462
4	5518	White Tuxpan	454
5	5517	Tsolo	450
6	5513	Mexico 7	449
7	5512	Mexico 5	448
8	—	Local	445
9	5514	Sicaragua	391
10	5516	Haiti Bulk	382
11	5511	Mexico 1	329
12	5515	Trinidad Bulk	321

Yields in LB per acre
Coefficient of variation: 49.6%
Differences between treatments not significant.

TABLE 8

TRIAL REFERENCE: 57-1-10 YANDEV
6 REPLICATED RANDOMISED BLOCK
COOPERATIVE TRIAL.

RANK	PROGENY	VARIETY	YIELD	TASSELLING TIME
1	5518	White Tuxpan	1908	56
2	5516	Haiti Bulk	1882	66
3	5517	Tsolo	1555	56
4	5513	Mexico 7	1528	66
5	5515	Trinidad Bulk	1501	62
6	5519	3-way cross	1366	62
7	5514	Sicaragua	1189	72
8	5525	Chariga	1161	46
9	5512	Mexico 5	1068	72
10	—	Local	1054	56
11	5511	Mexico 1	1021	62
12	5524	Bongo	767	46

Yields in LB per acre
Coefficient of variation: 54.8%
Differences between treatments not significant.

TABLE 9

TRIAL REFERENCE: 57-1-12 AGEGE
6 REPLICATED RANDOMISED BLOCK
COOPERATIVE TRIAL.

RANK	PROGENY	VARIETY	YIELD
1	5515	Trinidad Bulk	1439
2	5517	Tsolo	1413
3	5519	3-way cross	1227
4	5520	Florida Bulk	1227
5	5521	Br. 149 Trinidad	1187
6	5513	Mexico 7	1151
7	5514	Sicaragua	1117
8	—	Local	1088
9	5518	White Tuxpan	974
10	5512	Mexico 5	863
11	5516	Haiti Bulk	825
12	5511	Mexico 1	781

Yields in LB per acre
Coefficient of variation: 19.8%
L.S.D. 5%: 194 LB per acre.

TABLE 10

TRIAL REFERENCE: 57-1-13 AKURE
6 REPLICATED RANDOMISED BLOCK
COOPERATIVE TRIAL.

RANK	PROGENY	VARIETY	YIELD	RUST	LEAF BLIGHTS
1	5513	Mexico 7	3402	3.1	6.2
2	5512	Mexico 5	2926	3.9	7.0
3	5519	3-way cross	2871	2.5	7.8
4	5515	Trinidad bulk	2775	3.9	6.9
5	5511	Mexico 1	2756	3.1	14.0
6	5518	White Tuxpan	2689	2.3	8.7
7	5522	Mexico 13	2498	3.6	6.9
8	5523	EAFRO 250	2490	3.4	6.4
9	5514	Sicaragua	2454	2.9	6.6
10	5516	Haiti Bulk	2382	3.8	6.5
11	—	Local	2337	3.8	6.6
12	5517	Tsolo	2111	2.6	8.7

Yields in LB per acre
Coefficient of variation: 12.8%
L.S.D. 5%: 392 LB per acre.

TABLE 11

TRIAL REFERENCE: 57-1-14 EFFURUN
6 REPLICATED RANDOMISED BLOCK
COOPERATIVE TRIAL.

RANK	PROGENY	VARIETY	YIELD	RUST
1	5521	Br. 149 Trinidad	690	0.7
2	5512	Mexico 5	584	0.8
3	5517	Tsolo	555	1.0
4	5513	Mexico 7	524	0.9
5	5519	3-way cross	493	1.2
6	5516	Haiti Bulk	455	0.7
7	5518	White Tuxpan	412	0.9
8	5515	Trinidad Bulk	401	0.7
9	—	Local	396	0.7
10	5520	Florida Bulk	366	0.6
11	5514	Sicaragua	329	0.8
12	5511	Mexico 1	209	0.8

Yields in LB per acre
Coefficient of variation: 22.6%
L.S.D. 5%: 118 LB per acre.

TABLE 12

TRIAL REFERENCE: 57-1-15 ILARO
6 REPLICATED RANDOMISED BLOCK
COOPERATIVE TRIAL.

RANK	PROGENY	VARIETY	YIELD
1	5514	Sicaragua	1712
2	5513	Mexico 7	1680
3	5519	3-way cross	1589
4	5512	Mexico 5	1453
5	5517	Tsolo	1202
6	5515	Trinidad Bulk	1174
7	5523	EAFRO 250	1149
8	5516	Haiti Bulk	1075
9	5511	Mexico 1	1050
10	—	Local	1035
11	5522	Mexico 13	901
12	5518	White Tuxpan	878

Yields in LB per acre
Coefficient of variation: 24.0%
L.S.D. 5%: 344 LB per acre.

TABLE 13

TRIAL REFERENCE: 57-1-16A ILORA
6 REPLICATED RANDOMISED BLOCK
COOPERATIVE TRIAL.

RANK	PROGENY	VARIETY	YIELD	RUST
1	5513	Mexico 7	2136	0.6
2	5519	3-way cross	1901	1.1
3	5512	Mexico 5	1780	0.6
4	5515	Trinidad Bulk	1773	1.0
5	5518	White Tuxpan	1553	1.2
6	—	Local	1421	1.1
7	5523	EAFRO 250	1392	1.0
8	5516	Haiti Bulk	1377	1.1
9	5511	Mexico 1	1300	1.5
10	5522	Mexico 13	1196	1.0
11	5514	Sicaragua	1174	0.6
12	5517	Tsolo	978	1.3

Yields in LB per acre
Coefficient of variation: 26.9%
L.S.D. 5%: 466 LB per acre.

TABLE 14

TRIAL REFERENCE: 57-1-16B ILORA
6 REPLICATED RANDOMISED BLOCK
COOPERATIVE TRIAL.

RANK	PROGENY	VARIETY	YIELD
1	5513	Mexico 7	2065
2	5512	Mexico 5	2013
3	5514	Sicaragua	2018
4	5523	EAFRO 250	1965
5	5515	Trinidad Bulk	1838
6	5519	3-way cross	1757
7	5511	Mexico 1	1731
8	5522	Mexico 13	1702
9	5518	White Tuxpan	1640
10	—	Local	1622
11	5516	Haiti Bulk	1423
12	5517	Tsolo	1338

Yields in LB per acre
Coefficient of variation: 22.7%
Differences between treatments not significant.

TABLE 15

TRIAL REFERENCE: 57-1-17 IRRUA
6 REPLICATED RANDOMISED BLOCK
COOPERATIVE TRIAL.

RANK	PROGENY	VARIETY	YIELD	RUST
1	5523	EAFRO 250	1455	0.7
2	5517	Tsolo	1423	0.9
3	5515	Trinidad Bulk	1379	0.7
4	5514	Sicaragua	1334	0.6
5	5513	Mexico 7	1309	0.7
6	5519	3-way cross	1306	0.8
7	5512	Mexico 5	1222	0.8
8	5516	Haiti Bulk	1173	0.5
9	5518	White Tuxpan	1107	0.8
10	5522	Mexico 13	1023	0.8
11	5511	Mexico 1	937	0.3
12	—	Local	651	0.5

Yields in LB per acre
Coefficient of variation: 22.7%
L.S.D. 5%: 290 LB per acre.

TABLE 16

TRIAL REFERENCE: 57-1-18 OSHOGBO
6 REPLICATED RANDOMISED BLOCK
COOPERATIVE TRIAL.

RANK	PROGENY	VARIETY	YIELD
1	5514	Sicaragua	1885
2	5513	Mexico 7	1618
3	5515	Trinidad Bulk	1589
4	5517	Tsolo	1540
5	5518	White Tuxpan	1517
6	5519	3-way cross	1465
7	5516	Haiti Bulk	1440
8	5511	Mexico 1	1386
9	5522	Mexico 13	1367
10	5512	Mexico 5	1347
11	—	Local	1121

Yields in LB per acre
Coefficient of variation: 25.1%
Differences between treatments not significant.

TABLE 17

TRIAL REFERENCE: 57-1-19 IBADAN
6 REPLICATED RANDOMISED BLOCK
COOPERATIVE TRIAL.

RANK	PROGENY	VARIETY	YIELD	TASSELLING TIME
1	5517	Tsolo	2923	51
2	5515	Trinidad Bulk	2897	57
3	5513	Mexico 7	2790	58
4	5519	3-way cross	2781	55
5	5514	Sicaragua	2702	56
6	5522	Mexico 13	2546	56
7	5512	Mexico 5	2499	56
8	5523	EAfro 250	2443	52
9	5516	Haiti Bulk	2248	59
10	—	Local	2136	53
11	5518	White Tuxpan	2086	54
12	5511	Mexico 1	1975	59

Yields in LB per acre
Coefficient of variation: 9.7%
L.S.D. 5%: 388 LB per acre.

TABLE 18

TRIAL REFERENCE : 57-1-20 KUMBA
6 REPLICATED RANDOMISED BLOCK
COOPERATIVE TRIAL.

RANK	PROGENY	VARIETY	YIELD	RUST	TASSELLING TIME
1	5523	EAFRO 250	1153	3.0	48
2	5516	Haiti Bulk	1115	2.6	60
3	5515	Trinidad Bulk	867	2.9	56
4	5514	Sicaragua	789	2.6	54
5	5517	Tsolo	673	2.9	49
6	5512	Mexico 5	642	2.7	58
7	5522	Mexico 13	581	2.5	57
8	5513	Mexico 7	565	2.8	58
9	5519	3-way cross	503	2.9	56
10	5518	White Tuxpan	495	2.9	56
11	—	Local	441	2.9	53
12	5511	Mexico 1	201	2.6	62

Yields in LB per acre
Coefficient of variation : 34.7%
L.S.D. 5% : 269 LB per acre.

TABLE 19

TRIAL REFERENCE : 57-1-22 ADO EKITI
6 REPLICATED RANDOMISED BLOCK
COOPERATIVE TRIAL.

RANK	PROGENY	VARIETY	YIELD	RUST	LEAF BLIGHTS
1	5514	Sicaragua	1902	1.2	6.1
2	5513	Mexico 7	1877	1.2	5.2
3	5522	Mexico 13	1559	1.1	6.7
4	5515	Trinidad bulk	1557	2.0	6.5
5	5512	Mexico 5	1492	1.4	5.6
6	5517	Tsolo	1488	2.2	7.7
7	5519	3-way cross	1377	2.5	6.3
8	5518	White Tuxpan	1366	2.6	8.7
9	5523	EAFRO 250	1345	1.1	6.0
10	5516	Haiti Bulk	1172	1.3	4.7
11	—	Local	1081	2.9	7.9
12	5511	Mexico 1	833	1.7	16.9

Yields in LB per acre
Coefficient of variation: 16.8%
L.S.D. 5%: 276 LB per acre.

TABLE 20

TRIAL REFERENCE : 57-1-23 AGEGE
6 REPLICATED RANDOMISED BLOCK
COOPERATIVE TRIAL.

RANK	PROGENY	VARIETY	YIELD	RUST	LEAF BLIGHTS
1	5512	Mexico 5	883	0.1	7.6
2	5516	Haiti Bulk	877	0.0	6.7
3	5517	Tsolo	860	0.2	10.2
4	5519	3-way cross	851	0.1	9.5
5	5515	Trinidad Bulk	812	0.1	9.2
6	5518	White Tuxpan	776	0.1	11.2
7	5521	Br. 149 Trinidad	746	0.0	6.0
8	5514	Sicaragua	645	0.0	6.6
9	—	Local	509	0.2	11.2
10	5511	Mexico 1	448	0.0	17.0
11	5520	Florida Bulk	447	0.0	6.5
12	5513	Mexico 7	395	0.0	9.4

Yields in LB per acre
Coefficient of variation : 37.0%
L.S.D. 5%: 294 LB per acre.

TABLE 21

TRIAL REFERENCE : 57-1-26 ILARO
6 REPLICATED RANDOMISED BLOCK
COOPERATIVE TRIAL.

RANK	PROGENY	VARIETY	YIELD	RUST	LEAF BLIGHTS
1	5515	Trinidad Bulk	349	0.1	6.4
2	5516	Haiti Bulk	297	0.1	5.7
3	5517	Tsolo	288	0.1	11.1
4	—	Local	288	0.3	7.4
5	5513	Mexico 7	288	0.1	7.8
6	5512	Mexico 5	262	0.1	7.0
7	5514	Sicaragua	258	0.1	7.2
8	5522	Mexico 13	227	0.1	6.9
9	5523	EAfro 250	175	0.1	6.1
10	5519	3-way cross	170	0.1	8.0
11	5511	Mexico 1	113	0.0	13.9
12	5518	White Tuxpan	105	0.1	10.2

Yields in LB per acre
Coefficient of variation : 54.9%
L.S.D. 5%: 148 LB per acre.

TABLE 22

TRIAL REFERENCE: 57-1-27 ILORA
6 REPLICATED RANDOMISED BLOCK
COOPERATIVE TRIAL.

RANK	PROGENY	VARIETY	YIELD	RUST	LEAF BLIGHTS
1	5512	Mexico 5	1179	0.6	4.8
2	5514	Sicaragua	1133	0.6	4.1
3	5513	Mexico 7	1107	0.6	4.2
4	5516	Haiti Bulk	1042	1.1	4.5
5	5515	Trinidad Bulk	995	1.0	5.1
6	5519	3-way cross	929	1.1	4.9
7	5522	Mexico 13	889	1.0	4.1
8	5517	Tsolo	881	1.3	6.4
9	5511	Mexico 1	834	1.5	10.1
10	5518	White Tuxpan	833	1.2	4.8
11	5523	EAFRO 250	783	1.0	5.4
12	—	Local	637	1.1	3.9

Yields in LB per acre

Coefficient of variation: 29.6 %

Differences between treatments not significant.

TABLE 23

TRIAL REFERENCE: 57-1-28 IRRUA
6 REPLICATED RANDOMISED BLOCK
COOPERATIVE TRIAL.

RANK	PROGENY	VARIETY	YIELD	RUST	LEAF BLIGHTS
1	5519	3-way cross	961	0.5	3.7
2	5517	Tsolo	884	0.4	4.6
3	5514	Sicaragua	853	0.2	2.5
4	5523	EAFRO 250	789	0.2	2.7
5	5518	White Tuxpan	788	0.4	4.8
6	5513	Mexico 7	649	0.3	3.6
7	5522	Mexico 13	642	0.2	2.7
8	5512	Mexico 5	639	0.2	2.8
9	5515	Trinidad Bulk	557	0.3	4.6
10	5511	Mexico 1	412	0.3	10.6
11	5516	Haiti Bulk	361	0.2	2.4
12	—	Local	139	0.6	4.6

Yields in LB per acre

Coefficient of variation: 24.1 %

L.S.D. 5%: 178 LB per acre.

TABLE 24

TRIAL REFERENCE : 57-1-29 OSHOGBO
6 REPLICATED RANDOMISED BLOCK
COOPERATIVE TRIAL.

RANK	PROGENY	VARIETY	YIELD	RUST	LEAF BLIGHTS
1	5517	Tsolo	892	1.0	7.1
2	5515	Trinidad Bulk	762	0.6	5.6
3	—	Local	707	1.2	5.6
4	5519	3-way cross	666	1.3	5.8
5	5512	Mexico 5	655	0.2	4.9
6	5516	Haiti Bulk	556	0.3	4.0
7	5518	White Tuxpan	554	0.6	7.1
8	5513	Mexico 7	544	0.3	4.0
9	5514	Sicaragua	519	0.4	4.5
10	5522	Mexico 13	370	0.3	5.0
11	5511	Mexico 1	240	0.4	10.1

Yields in LB per acre
Coefficient of variation : 42.6 %
L.S.D. 5% 288 LB per acre.

TABLE 25

TRIAL REFERENCE : 57-1-30 ILORIN
6 REPLICATED RANDOMISED BLOCK
COOPERATIVE TRIAL.

RANK	PROGENY	VARIETY	YIELD	RUST	LEAF BLIGHTS
1	5514	Sicaragua	1789	2.0	6.2
2	5515	Trinidad Bulk	1581	2.0	6.0
3	5513	Mexico 7	1571	1.5	7.6
4	5517	Tsolo	1350	3.0	6.8
5	5516	Haiti Bulk	1325	2.1	6.3
6	5518	White Tuxpan	1216	2.8	6.7
7	5511	Mexico 1	1211	2.8	7.4
8	5512	Mexico 5	1161	1.8	5.4
9	5519	3-way cross	1117	2.8	6.1
10	5525	Chariga	796	4.0	7.5
11	—	Local	768	3.0	5.5
12	5524	Bongo	595	4.0	5.0

Yields in LB per acre
Coefficient of variation : 10.1 %
L.S.D. 5%: 139 LB per acre.

TABLE 26

TRIAL REFERENCE: 57-1-32 IBADAN
6 REPLICATED RANDOMISED BLOCK
COOPERATIVE TRIAL.

RANK	PROGENY	VARIETY	YIELD	RUST	TASSELLING TIME
1	5512	Mexico 5	2643	0.8	64
2	5523	EAFRO 250	2244	0.7	61
3	5519	3-way cross	2162	0.9	62
4	--	Local	2058	1.0	64
5	5517	Tsolo	2039	0.8	60
6	5515	Trinidad Bulk	2022	0.8	64
7	5516	Haiti Bulk	1947	0.7	68
8	5522	Mexico 13	1778	0.7	66
9	5514	Sicaragua	1763	0.7	64
10	5518	White Tuxpan	1718	0.8	62
11	5513	Mexico 7	1182	0.7	67
12	5511	Mexico 1	965	0.8	69

Yields in LB per acre
Coefficient of variation: 14.1%
L.S.D. 5%: 301 LB per acre.

TABLE 27

TRIAL REFERENCE: 57-2-1 UMUDIKE
ACQUISITION TRIAL AT UMUDIKE.

RANK	PROGENY	VARIETY	YIELD	TASSELLING TIME
1	5523	EAFRO 250	995	65
2	5512	Mexico 5	813	69
3	--	Local	782	65
4	3748	Florida 7	719	65
5	3751	Florida 8	650	65
6	3749	Florida 6	554	66
7	5525	Chariga	532	51
8	3740	Florida 13	496	65
9	3743	Florida 5	463	61
10	3752	Florida 12	446	65
11	3754	Florida 1	429	66
12	5524	Bongo	385	51
13	3744	Florida 3	369	69
14	3742	Florida 14	330	66
15	3388	Florida 15	302	65
16	3750	Florida 11	288	61

Yields in LB per acre
Coefficient of variation 52.6%
L.S.D. 5%: 348 LB/acre.

TABLE 28

TRIAL REFERENCE 57-2-2 BENIN
10 x 10 TRIPLE LATTICE
ACQUISITION TRIAL AT BENIN

RANK	PROGENY	VARIETY	YIELD	GROUP MEAN	RUST	LEAF BLIGHTS	MATURITY TIME
10	742	Br. 157 Trinidad	3435	2633	2.2	9.6	104
11	489	Br. 162 Trinidad	3428		1.6	9.7	100
15	732	Br. 156 Trinidad	3376		2.0	8.9	101
16	737	Br. 153 Trinidad	3338		2.0	9.0	101
17	3834	Br. 149 Trinidad	3330		1.7	6.2	107
31	518	Br. 161 Trinidad	2987		2.3	6.0	105
40	522	Br. 158 Trinidad	2731		2.3	5.7	106
48	730	Br. 160 Trinidad	2698		2.0	6.3	106
60	729	Br. 164 Trinidad	2246		1.8	6.4	104
69	460	Br. 154 Trinidad	2082		2.2	7.2	104
93	1905	Br. 147 Trinidad	1048		2.0	5.9	106
95	863	Br. 150 Trinidad	893		2.0	10.0	105
1	514	Dom Rep 118	3934		1.7	7.4	96
2	469	Dom Rep 60	3718		2.1	5.9	92
5	470	Dom Rep 49	3533		1.6	7.6	98
6	5096	Dom Rep 8	3531		1.2	6.6	93
8	510	Dom Rep 191	3521		2.0	7.0	99
12	508	Dom Rep 101	3419		2.4	7.3	97
13	497	Dom Rep 30	3384		2.2	6.9	96
17	480	Dom Rep 234	3330		2.1	5.7	97
20	626	Dom Rep 108	3283		1.9	5.9	94
22	506	Dom Rep 141	3221		1.6	6.5	96
25	509	Dom Rep 208	3197		2.3	5.9	94
26	651	Dom Rep 205	3196		2.5	10.7	97
29	486	Dom Rep 29	3049		1.8	8.0	95
34	439	Dom Rep 87	2864		1.9	8.3	96
35	535	Dom Rep 238	2853		2.4	8.3	96
36	488	Dom Rep 250	2835		1.9	6.8	94
37	507	Dom Rep 57	2777		1.5	6.9	92
39	482	Dom Rep 162	2754		2.5	8.4	97
45	495	Dom Rep 139	2651		2.2	5.4	96
48	455	Dom Rep 184	2555		2.3	7.4	95
51	552	Dom Rep 17	2500		2.2	6.0	95
52	501	Dom Rep 255	2499		1.4	6.0	95
53	3868	Dom Rep 78	2435		1.6	5.6	97
54	461	Dom Rep 54	2394		1.9	6.4	94
57	631	Dom Rep 8	2332		1.8	7.0	94
58	472	Dom Rep 137	2326		1.9	6.8	94
61	541	Dom Rep 231	2245		1.6	6.3	99
62	676	Dom Rep 233	2234		1.8	5.9	101
63	660	Dom Rep 52	2219		1.6	6.4	99
65	658	Dom Rep 96	2163		1.4	6.6	97
66	547	Dom Rep 207	2157		1.4	9.0	97
69	555	Dom Rep 24	2082		1.5	5.9	91
76	652	Dom Rep 94	1878		1.4	6.2	95
81	659	Dom Rep 221	1481		1.7	5.9	96
83	5029	Dom Rep 218	1383		2.0	7.8	93
90	656	Dom Rep 121	1147	2628	1.4	5.4	100
100	665	Dom Rep 199	143		1.5	5.5	103

ACQUISITION TRIAL AT BENIN—*Continued.*

RANK	PROGENY	VARIETY	YIELD	GROUP MEAN	RUST	LEAF BLIGHTS	MATURITY TIME
4	675	Br. 113A Cuba	3538		2.3	9.0	101
14	664	Br. 115A Cuba	3377		1.8	6.3	100
21	503	Br. 117 Cuba	3245		2.8	11.1	95
27	448	Br. 112 Cuba	3104		2.9	9.7	100
28	532	Br. 102 Cuba	3063		3.0	9.2	96
30	716	Br. 109 Cuba	3035		2.1	9.6	100
38	543	Br. 116 Cuba	2764		1.9	8.6	98
41	671	Br. 106 Cuba	2716		2.3	8.9	97
44	666	Br. 101 Cuba	2696		2.8	8.1	98
50	661	Br. 108 Cuba	2534		2.7	2.1	98
55	504	Br. 114 Cuba	2386		2.5	8.2	98
72	674	Br. 110 Cuba	1906		1.9	7.1	97
73	553	Br. 113 Cuba	1888		2.6	8.7	100
85	672	Br. 103 Cuba	1325		2.0	6.7	98
92	673	Br. 100 Cuba	1015	2573	2.0	5.8	101
19	662	Br. 137 St. Croix	3311		2.8	8.7	99
46	620	Br. 136 St. Croix	2650		2.0	7.5	97
80	446	Br. 135 St. Croix	1558	2506	1.4	11.2	95
3	457	Br. 125A Haiti	3698		1.8	6.2	107
23	765	Br. 168 Haiti	3220		2.1	6.7	103
33	491	Br. 120 Haiti	2893		2.7	6.9	91
42	539	Br. 124 Haiti	2715		2.5	6.9	105
47	761	Br. 122 Haiti	2628		2.2	7.1	100
49	475	Br. 123 Haiti	2546		2.4	6.3	106
56	885	Br. 131 Haiti	2343		3.3	8.1	104
64	751	Br. 132 Haiti	2170		2.7	9.2	106
67	923	Br. 125 Haiti	2153		2.3	8.3	106
70	721	Br. 133 Haiti	2049		3.0	7.2	105
71	720	Br. 129 Haiti	2024		2.1	9.0	107
75	896	Br. 167 Haiti	1884		3.0	7.7	107
78	909	Br. 130 Haiti	1785		2.6	8.5	112
88	775	Br. 127 Haiti	1239		2.4	8.7	104
99	685	Br. 126 Haiti	427	2252	2.6	6.1	101
7	793	Jamaica 4	3527		3.3	9.6	103
77	463	Jamaica 2	1807		1.5	7.0	108
98	677	Jamaica 1	812	2049	2.1	5.9	101
73	908	Dominica 1	1888	1888	1.6	12.1	101
24	1870	Br. 173 Dominica	3203		1.5	8.9	98
32	919	Br. 174 Dominica	2968		2.0	21.5	107
91	940	Br. 175 Dominica	1102		1.6	14.1	107
94	709	Br. 170 Dominica	900		2.2	9.9	105
98	710	Br. 171 Dominica	471	1729	1.9	10.9	101
59	515	Br. 146 Martinique	2247		3.5	12.2	87
68	549	Br. 139 Martinique	2105		3.1	9.3	91
79	599	Br. 141 Martinique	1619		2.7	9.2	91
82	550	Br. 143 Martinique	1404		2.5	11.1	88
84	594	Br. 145 Martinique	1373		1.6	9.2	87
85	479	Br. 142 Martinique	1326		2.5	11.5	91
89	551	Br. 147 Martinique	1226		3.2	12.7	89
96	490	Br. 140 Martinique	825	1516	1.8	13.3	90
87	623	Br. 200 Peru	1244	1244	3.1	7.4	101

Yields in LB per acre
Coefficient of variation: 23%
L.S.D. 5%: 356 LB per acre.

TABLE 29

TRIAL REFERENCE: 57-2-3 IBADAN
8×7 RECTANGULAR LATTICE
ACQUISITION TRIAL AT IBADAN

RANK	PROGENY	VARIETY	YIELD	GROUP MEAN	TASSELLING TIME
4	3891	Haiti Bulk	2871	2509	59
13	3065	Trinidad Bulk	2146		57
2	1080	Mexico 5	3122	1716	57
42	—	Mexico 16	1436		61
56	—	Mexico 1	589		60
1	3779	EAfro 231	3468		57
3	3725	EAfro 274	2920		54
5	3786	EAfro 225	2678		57
6	3728	EAfro 272	2420		52
7	3729	EAfro 271	2396		52
8	3735	EAfro 270	2339		54
9	3726	EAfro 269	2315		54
10	3733	EAfro 265	2291		53
11	3732	EAfro 234	2186		52
12	3635	EAfro 254	2162		44
14	3780	EAfro 227	2121		61
15	3785	EAfro 230	2073		60
16	3730	EAfro 233	2057		52
17	3739	EAfro 263	2033		54
18	3727	EAfro 262	1992		53
19	3731	EAfro 250	1984		54
20	3641	EAfro 248	1952		47
21	3644	EAfro 238	1912		52
23	3645	EAfro 273	1799		52
24	3344	EAfro 236	1775		61
25	5488	EAfro 228	1742		64
27	3640	EAfro 252	1702		44
28	3646	EAfro 246	1678		45
29	3736	EAfro 268	1621		54
30	3628	EAfro 235	1621		59
31	3637	EAfro 240	1613		48
32	3628	EAfro 253	1597		43
33	3639	EAfro 275	1581		43
34	3643	EAfro 244	1565		49
35	3649	EAfro 259	1541		49
36	3642	EAfro 245	1476		48
37	3734	EAfro 264	1468		54
39	3632	EAfro 258	1452		44
40	3633	EAfro 251	1452		44
41	3636	EAfro 239	1444		46
43	3347	EAfro 237	1428		57
44	3637	EAfro 242	1412		43
45	3634	EAfro 256	1363		47
46	3647	EAfro 241	1242		50
47	3631	EAfro 255	1210		46
48	3629	EAfro 257	1178		49

ACQUISITION TRIAL AT IBADAN—*Continued.*

RANK	PROGENY	VARIETY	YIELD	GROUP MEAN	TASSELLING TIME
49	3781	EAfro 226	1162	1753	59
50	3630	EAfro 249	1162		44
51	3648	EAfro 243	1121		50
52	3650	EAfro 260	1113		51
53	3341	EAfro 229	960		63
55	3245	EAfro 247	637		50
22	3426	Abak Red Flour	1831		51
26	5244	Lagos White	1702		54
38	3764	Br. 200 Peru	1468		57
54	3233	Iso Local	669		52

Yields in LB per acre
Coefficient of variation : 13%
L.S.D. 5% : 484 LB/acre.

TABLE 30

TRIAL REFERENCE 57-2-4 ILORA
12 × 12 QUADRUPLE LATTICE
ACQUISITION TRIAL AT ILORA

RANK	PROGENY	VARIETY	YIELD	GROUP MEAN	RUST	LEAF BLIGHTS
10	3405	Mexico 13	2253	2253	1.1	6.1
5	3779	EAfro 231	2539		1.0	7.2
6	5523	EAfro 250	2496		1.0	5.9
9	3786	EAfro 225	2253		1.0	9.6
11	3726	EAfro 269	2246		1.0	6.6
12	3739	EAfro 263	2216		1.0	5.5
20	3729	EAfro 271	2037		0.9	8.6
21	3732	EAfro 234	2031		0.9	5.8
22	3785	EAfro 230	2026		0.9	5.6
23	3733	EAfro 265	2015		1.0	6.7
29	3784	EAfro 237	1970	1830	0.9	6.7
31	3640	EAfro 252	1930		0.9	8.5
40	3780	EAfro 227	1778		0.9	8.4
42	3736	EAfro 268	1757		0.8	6.1
43	3725	EAfro 274	1756		—	8.3
44	3735	EAfro 270	1754		0.9	6.4
53	3788	EAfro 235	1637		1.0	6.0
85	3641	EAfro 248	1223		0.9	6.9
96	3649	EAfro 259	1095		0.9	7.9
109	3650	EAfro 260	946		0.8	7.8
114	3633	EAfro 251	894	1830	0.8	7.8
1	5112	Br. 155 Trinidad	2730		1.0	7.6
3	5515	Trinidad Bulk	2651		1.0	8.4

ACQUISITION TRIAL AT ILORA—*Continued.*

RANK	PROGENY	VARIETY	YIELD	GROUP MEAN	RUST	LEAF BLIGHTS
7	735	Br. 154 Trinidad	2413		—	6.7
8	5111	Br. 165 Trinidad	2337		1.0	7.3
14	5075	Br. 163 Trinidad	2200		0.9	6.8
15	5153	Br. 159 Trinidad	2184		1.0	5.7
35	879	Br. 161 Trinidad	1889		1.0	6.3
36	5157	Br. 151 Trinidad	1874		1.0	7.2
38	1806	Br. 160 Trinidad	1869		—	5.7
45	522	Br. 158 Trinidad	1736		1.0	5.9
56	5217	Br. 166 Trinidad	1583		0.9	5.9
58	489	Br. 162 Trinidad	1561		0.6	7.4
60	3834	Br. 149 Trinidad	1522		0.4	5.5
64	456	Br. 156 Trinidad	1509		1.2	5.9
71	737	Br. 153 Trinidad	1404		0.8	5.5
81	3021	Br. 157 Trinidad	1239		0.9	—
88	729	Br. 164 Trinidad	1196		0.9	5.7
93	1905	Br. 147 Trinidad	1152		1.0	6.1
98	524	Br. 152 Trinidad	1072		0.9	7.7
129	866	Br. 150 Trinidad	508	1731	—	7.7
4	670	Br. 104 Cuba	2548		0.9	6.3
17	5218	Br. 113A Cuba	2104		0.9	7.5
19	664	Br. 115A Cuba	2056		0.8	6.3
30	453	Br. 115 Cuba	1957		1.0	6.7
39	694	Br. 111 Cuba	1837		1.0	7.5
41	553	Br. 113 Cuba	1762		1.2	7.7
46	438	Br. 107 Cuba	1729		1.0	6.5
48	468	Br. 105 Cuba	1708		1.0	6.4
49	661	Br. 108 Cuba	1700		1.1	8.3
57	716	Br. 109 Cuba	1577		1.0	6.1
59	504	Br. 114 Cuba	1533		0.8	5.4
63	543	Br. 116 Cuba	1512		0.9	6.4
67	671	Br. 106 Cuba	1496		1.0	7.3
68	666	Br. 101 Cuba	1491		—	6.4
78	532	Br. 102 Cuba	1274		1.0	6.3
83	503	Br. 117 Cuba	1227		1.0	7.6
95	674	Br. 110 Cuba	1142		0.7	5.8
100		Br. 113A Cuba	1034		1.0	—
105	743	Br. 112 Cuba	982		1.0	5.2
122	672	Br. 103 Cuba	764		0.8	5.8
128	673	Br. 100 Cuba	537	1522	0.9	6.7
2	939	Br. 125A Haiti	2682		1.0	5.3
28	3829	Br. 121 Haiti	1982		1.0	5.5
52	765	Br. 168 Haiti	1652		1.1	5.8
61	896	Br. 167 Haiti	1522		1.3	5.9
76	915	Br. 124 Haiti	1352		1.2	5.7
79	419	Br. 120 Haiti	1264		0.8	5.5
82	775	Br. 127 Haiti	1232		1.0	8.0
87	885	Br. 131 Haiti	1205		1.2	6.1
90	5208	Br. 123 Haiti	1172		1.5	5.6
94	940	Br. 175 Haiti	1143		—	13.7
102	720	Br. 129 Haiti	1024		1.0	5.7

ACQUISITION TRIAL AT ILORA—*Continued.*

RANK	PROGENY	VARIETY	YIELD	GROUP MEAN	RUST	LEAF BLIGHTS
103	721	Br. 133 Haiti	1016	1312	1.0	6.7
106	923	Br. 125 Haiti	969		0.9	6.6
108	761	Br. 122 Haiti	950		0.9	5.6
111	685	Br. 126 Haiti	935		0.8	6.3
116	3333	Br. 132 Haiti	849		1.1	7.1
125	909	Br. 130 Haiti	594	1312	1.0	6.8
18	662	Br. 137 St. Croix	2087		1.0	7.3
91	663	Br. 134 St. Croix	1162		1.0	6.7
92	620	Br. 136 St. Croix	1159		0.9	6.6
117	446	Br. 135 St. Croix	839		0.8	6.9
13	5529	Dom Rep 119	2202	1312	—	6.1
16	5179	Dom Rep 143	2106		0.8	5.5
24	508	Dom Rep 101	2012		0.8	5.5
25	486	Dom Rep 29	1999		0.9	8.0
26	5164	Dom Rep 63	1988		0.8	6.0
27	482	Dom Rep 162	1982	1312	1.0	5.4
32	497	Dom Rep 30	1927		0.9	5.5
37	5165	Dom Rep 52	1871		—	6.4
47	656	Dom Rep 121	1719		1.0	5.4
50	646	Dom Rep 234	1690		1.1	5.5
51	3868	Dom Rep 78	1654	1312	0.9	5.9
54	667	Dom Rep 49	1614		0.9	5.5
65	555	Dom Rep 24	1509		1.0	6.2
66	488	Dom Rep 250	1508		1.0	5.2
70	510	Dom Rep 191	1448		0.7	6.1
72	5095	Dom Rep 60	1402	1312	0.4	5.4
73	612	Dom Rep 17	1384		0.8	6.2
74	640	Dom Rep 207	1374		—	10.2
75	5096	Dom Rep 8	1358		—	6.2
77	495	Dom Rep 139	1292		—	6.4
80	617	Dom Rep 57	1259	1312	1.0	5.9
84	652	Dom Rep 94	1224		0.9	6.4
86	655	Dom Rep 238	1213		0.8	7.3
89	641	Dom Rep 208	1195		—	6.8
97	651	Dom Rep 205	1073		0.9	7.8
101	659	Dom Rep 221	1026	1312	0.8	5.8
104	1908	Dom Rep 118	1011		0.8	6.3
107	461	Dom Rep 54	959		0.7	5.9
110	626	Dom Rep 108	937		1.4	5.9
112	631	Dom Rep 8	932		0.6	6.5
113	633	Dom Rep 137	916	1312	1.0	6.5
115	5029	Dom Rep 218	856		0.8	8.1
119	506	Dom Rep 141	811		0.8	5.5
120	642	Dom Rep 225	810		1.0	6.0
123	658	Dom Rep 96	760		0.7	5.6
127	676	Dom Rep 233	553	1274	—	5.9
132	647	Dom Rep 231	466		1.0	5.5
136	610	Dom Rep 158	336		1.0	6.1
137	609	Dom Rep 184	294		0.8	7.2
138	611	Dom Rep 87	292		0.5	7.9

ACQUISITION TRIAL AT ILORA—*Continued.*

RANK	PROGENY	VARIETY	YIELD	GROUP MEAN	RUST	LEAF BLIGHTS
34	919	Br. 174 Dominica	1905		0.9	14.3
55	—	Dominica 1	1588		0.9	7.8
62	1870	Br. 173 Dominica	1517		—	7.4
69	905	Br. 172 Dominica	1491		0.9	8.3
124	709	Br. 170 Dominica	619		1.0	11.7
134	71	Br. 171 Dominica	397	1253	0.8	6.7
18	793	Jamaica 4	1917		1.1	7.3
91	788	Jamaica 3	767		0.7	6.7
92	463	Jamaica 2	582		0.9	6.6
117	677	Jamaica 1	481	937	0.8	6.9
133	623	Br. 200 Peru	450	450	1.0	6.5
99	597	Br. 147 Martinique	1056		1.0	8.7
118	549	Br. 139 Martinique	823		1.0	7.6
131	515	Br. 146 Martinique	470		0.9	12.1
135	466	Br. 138 Martinique	375		1.0	9.5
139	550	Br. 143 Martinique	186		1.1	7.5
140	595	Br. 140 Martinique	181		1.0	14.8
141	599	Br. 141 Martinique	76		0.8	6.5
142	598	Br. 142 Martinique	67		0.9	6.5
143	594	Br. 145 Martinique	57		1.0	11.9
144	503	Br. 144 Martinique	25	331	1.0	5.0

Yields in LB per acre
Coefficient of variation: 39 %
L.S.D. 5%: 1054 LB per acre.

TABLE 31

TRIAL REFERENCE 57-2-6 AT KUMBO
6 REPLICATED RANDOMISED BLOCK
ACQUISITION TRIAL AT KUMBO

RANK	ACQUISITION	VARIETY	YIELD
1	907	Katumbili (Nwanza)	1089
2	915	Nyanza	951
3	914	Hickory King	900
4	905	Muratha (Scottlabs)	893
5	912	Katumbili (Nachingwea)	842
6	908	Buganda	842
7	906	Ulu	828
8	—	Local	799
9	911	Katumbili (Kilosa)	791
10	909	Muratha (Nam)	733
11	913	Kitale flat white	697
12	910	Njoro flat white	632
13	916	Muratha K8	617
14	917	Rongai yellow	385

Yields in LB per arce

TABLE 32

TRIAL REFERENCE 57-2-7 AGEGE
 DESIGN: 5×21 YOUDEN SQUARE
 ACQUISITION TRIAL AT AGEGE.

RANK	PROGENY	VARIETY	YIELD	GROUP MEAN	RUST	LEAF BLIGHTS
1	5512	Mexico 5	1612	1554	0.0	12.5
3	3410	Mexico 1	1495		0.1	8.5
2	5516	Haiti Bulk	1515		0.0	6.6
6	5515	Trinidad Bulk	1208	1362	0.0	7.2
5	5520	Florida Bulk	1268		0.0	5.8
4	6084	Florida 8	1474		0.0	5.4
7	6181	Florida 7	1197	1066	0.0	5.4
8	3384	Florida 10	1066		0.0	6.2
9	3369	Florida 6	1065		0.0	11.4
10	6073	Florida 9	806	765	0.0	5.5
11	6075	Florida 14	765		0.0	18.5
12	3390	Florida 3	731		0.0	9.2
13	3365	Florida 2	678	663	0.0	13.9
14	5542	Florida 12	663		0.0	7.0
15	3388	Florida 15	621		0.0	14.9
16	5546	Florida 4	593	547	0.0	12.6
17	5541	Florida 13	547		0.0	5.5
18	3391	Florida 5	516		0.0	13.7
19	3387	Florida 16	506	491	0.0	10.3
20	3366	Florida 11	491		0.0	8.5
21	3389	Florida 1	467		0.0	6.5

Yields in LB dry grain per acre
 Coefficient of variation : 37%
 L.S.D. 5%: 672 LB per acre.

TABLE 33

TRIAL REFERENCE 57-2-8 IBADAN
 7×8 RECTANGULAR LATTICE
 ACQUISITION TRIAL AT IBADAN.

RANK	PROGENY	VARIETY	YIELD	GROUP MEAN	RUST	LEAF BLIGHTS	MATURITY TIME
2	5317	Tsolo	2057	2057	0.7	7.4	103
12	5516	Haiti Bulk	1718		0.6	6.0	104
27	5515	Trinidad Bulk	1366		0.6	7.0	102
1	3779	EAfro 231	2602	1542	0.6	5.5	108
3	3788	EAfro 235	2035		0.6	5.5	108
4	3735	EAfro 270	2011		0.6	6.0	97
5	3785	EAfro 230	1943	1912	0.4	7.1	108
6	3626	EAfro 269	1912		0.6	6.7	101
7	3729	EAfro 271	1882		0.5	8.5	100
9	3784	EAfro 237	1746	1729	—	6.0	102
10	3633	EAfro 251	1729		0.5	7.6	87
11	3728	EAfro 272	1722		0.6	6.1	97
13	3640	EAfro 252	1688	1688	0.5	7.1	94

ACQUISITION TRIAL AT IBADAN—*Continued.*

RANK	PROGENY	VARIETY	YIELD	GROUP MEAN	RUST	LEAF BLIGHTS	MATURITY TIME
15	3732	EAFRO 234	1670		0.4	11.8	98
16	3344	EAFRO 236	1650		0.7	7.6	108
17	3636	EAFRO 239	1589		0.5	7.6	93
18	3725	EAFRO 274	1583		0.6	7.1	102
19	3627	EAFRO 240	1575		0.6	10.4	97
20	3786	EAFRO 225	1558		0.5	6.1	102
21	3734	EAFRO 264	1486		0.6	7.0	100
22	3645	EAFRO 273	1479		0.7	5.9	98
23	3635	EAFRO 254	1462		0.4	5.9	88
24	3644	EAFRO 238	1462		0.6	7.9	98
25	3780	EAFRO 227	1457		0.3	8.2	105
27	3727	EAFRO 262	1441		0.5	5.6	97
28	3730	EAFRO 233	1412		0.4	4.6	99
29	3736	EAFRO 268	1382		0.4	4.3	100
31	3744	EAFRO 250	1365		0.6	5.4	97
33	3641	EAFRO 248	1342		0.6	7.6	103
34	3646	EAFRO 246	1339		0.6	10.0	—
35	3739	EAFRO 263	1335		0.5	5.3	101
36	3781	EAFRO 226	1327		0.4	4.3	102
37	3631	EAFRO 255	1308		0.4	10.7	85
38	3630	EAFRO 249	1297		0.5	6.8	96
39	3632	EAFRO 258	1267		0.5	6.1	85
40	3629	EAFRO 257	1257		0.6	7.4	98
41	3628	EAFRO 253	1237		0.2	5.6	91
42	3650	EAFRO 260	1226		0.5	7.4	97
43	3633	EAFRO 265	1221		0.5	5.2	102
44	3647	EAFRO 241	1203		0.6	7.3	98
45	6030	EAFRO 243	1172		0.5	9.1	98
46	3637	EAFRO 242	1102		0.4	6.8	85
47	3642	EAFRO 245	1074		0.6	9.1	93
48	3639	EAFRO 275	991		0.6	9.0	87
49	6029	EAFRO 244	973		0.6	13.1	98
50	3634	EAFRO 256	953		0.5	8.1	95
51	5468	EAFRO 259	932		0.5	5.9	97
52	3655	EAFRO 247	922		0.6	9.3	97
54	5488	EAFRO 228	647	1434	0.5	4.1	—
8	3888	Mexico 5	1762		0.5	5.8	105
26	3397	Mexico 4	1454		0.5	8.4	101
32	3410	Mexico 1	1358		0.4	5.4	104
53	1927	Mexico 16	666	1310	0.6	11.0	105
14	5254	Lagos white	1687		0.8	6.4	101
55	623	Br. 200 Peru	632	1132	0.5	4.5	103
56	5525	Chariga	519	519	0.9	11.6	82

Yields in LB per acre
L.S.D. 5%: 668 LB per acre.

TABLE 34

TRIAL REFERENCE 57-2-9 ILORA
7×8 RECTANGULAR LATTICE
ACQUISITION TRIAL AT ILORA.

RANK	PROGENY	VARIETY	YIELD	GROUP MEAN	RUST	LEAF BLIGHTS
2	5518	White Tuxpan	2937	2937	0.8	5.1
12	5517	Tsolo	2375	2375	0.8	4.6
10	5515	Trinidad Bulk	2409		0.2	4.7
15	5516	Haiti Bulk	2341		0.7	3.5
19	—	Martinique Bulk	2121	2290	0.8	5.3
1	3735	EAfro 270	2945		0.5	3.6
3	3779	EAfro 231	2909		0.4	3.7
5	3626	EAfro 269	2778		0.5	4.3
6	3729	EAfro 271	2726		0.9	6.3
7	3788	EAfro 235	2699		0.5	3.4
8	3725	EAfro 274	2529		0.5	5.5
9	3785	EAfro 230	2439		0.5	5.2
10	3344	EAfro 236	2409		0.6	4.6
13	3736	EAfro 268	2347		0.4	3.9
14	3780	EAfro 227	2343		0.3	5.4
16	3640	EAfro 252	2220		0.5	7.2
17	3635	EAfro 254	2157		0.5	5.6
18	3634	EAfro 256	2145		—	6.9
20	3730	EAfro 233	2119		0.2	7.1
21	3739	EAfro 263	2109		0.7	4.3
22	3646	EAfro 246	2107		0.4	6.7
23	3732	EAfro 234	2105		0.4	3.5
24	3630	EAfro 249	2105		0.4	4.5
25	3733	EAfro 265	2097		0.6	6.4
27	3636	EAfro 239	2064		0.5	6.3
28	3647	EAfro 241	2048		0.4	6.0
29	3637	EAfro 242	2012		0.5	5.3
30	3744	EAfro 250	1992		0.4	3.3
31	3734	EAfro 264	1980		0.5	3.4
32	3728	EAfro 272	1960		0.2	4.4
33	3635	EAfro 254	1941		—	5.6
36	3786	EAfro 225	1728		0.1	—
37	3645	EAfro 273	1714		0.6	3.9
38	5468	EAfro 259	1693		0.7	5.6
39	3641	EAfro 248	1691		0.6	5.8
40	5488	EAfro 228	1651		0.7	2.9
41	3633	EAfro 251	1639		0.3	5.6
42	3631	EAfro 255	1621		0.6	6.7
43	6029	EAfro 244	1613		0.4	8.9
44	3642	EAfro 245	1611		0.4	5.9
45	3650	EAfro 260	1540		0.3	5.5
46	3627	EAfro 240	1498		0.7	8.7
47	3639	EAfro 275	1488		0.5	3.6
48	3781	EAfro 226	1439		0.1	2.9
49	3632	EAfro 258	1381		0.1	5.3

ACQUISITION TRIAL AT ILORA—*Continued.*

RANK	PROGENY	VARIETY	YIELD	GROUP MEAN	RUST	LEAF BLIGHTS
51	3629	EAFRO 257	1137	2018	0.4	4.1
4	3410	Mexico 1	2832		0.5	4.4
26	3397	Mexico 4	2074		1.1	5.7
35	3888	Mexico 5	1885		0.4	4.0
52	1927	Mexico 16	1006	1949	0.2	8.1
34	5254	Lagos white	1933		0.9	3.7
50	5983	Akwete White Flour	1181		0.9	4.1
53	5984	Ikom White Flour	988		1.2	3.5
54	623	Br. 200 Peru	974	1269	0.5	3.4
55	5524	Chariga	417		1.3	9.9
56	—	Bongo	26	222	2.2	11.7

Yields in LB per acre
 Coefficient of variation : 22 %
 L.S.D. 5% : 470 LB per acre.

TABLE 35

TRIAL REFERENCE 57-2-10 ILORA
 BALANCED INCOMPLETE BLOCK
 ACQUISITION TRIAL AT ILORA.

RANK	PROGENY	VARIETY	YIELD	GROUP MEAN	RUST	LEAF BLIGHTS
1	5512	Mexico 5	3227		0.6	5.6
2	3889	Mexico 1	2772	3000	0.5	7.6
5	6219	Lagos white	2328	2328	1.3	4.6
3	592	Br. 138 Martinique	2534		0.7	3.9
4	593	Br. 139 Martinique	2293		2.5	3.9
6	596	Br. 143 Martinique	2293		0.7	3.5
7	5752	Br. 145 Martinique	1917		0.5	7.3
8	597	Br. 147 Martinique	1710		0.4	5.2
9	5989	Br. 144 Martinique	1709		0.6	5.8
10	595	Br. 140 Martinique	1638		0.5	5.9
11	5992	Br. 146 Martinique	1626		0.8	7.7
12	5985	Br. 141 Martinique	1544		0.6	5.9
13	598	Br. 142 Martinique	1272	1797	0.6	3.0

Yields in LB per acre.

TABLE 36

TRIAL REFERENCE 57-2-11 AGEGE
BALANCED INCOMPLETE BLOCK
ACQUISITION TRIAL AT AGEGE.

RANK	PROGENY	VARIETY	YIELD	GROUP MEAN	RUST	LEAF BLIGHTS
1	5512	Mexico 5	1894		0.0	14.1
2	3889	Mexico 1	1487	1691	0.0	16.9
3	6219	Lagos white	1588	1588	0.5	10.0
4	596	Br. 143 Martinique	1256		0.0	10.6
5	5752	Br. 145 Martinique	1179		0.0	16.1
6	597	Br. 147 Martinique	1133		0.0	13.6
7	591	Br. 146 Martinique	1128		0.0	12.9
8	598	Br. 142 Martinique	1064		0.0	10.7
9	593	Br. 139 Martinique	909		0.0	8.7
10	5985	Br. 141 Martinique	900		0.0	15.1
11	595	Br. 140 Martinique	896		0.0	13.0
12	600	Br. 144 Martinique	791		0.5	9.6
13	592	Br. 138 Martinique	764	1002	0.0	10.3

Yields in LB per acre.

TABLE 37

TRIAL REFERENCE 57-2-12 ILORA
8×9 RECTANGULAR LATTICE
ACQUISITION TRIAL AT ILORA.

RANK	PROGENY	VARIETY	YIELD	GROUP MEAN	RUST	LEAF BLIGHTS
1	5289	Mexico 1	1911		0.8	4.5
10	—	Mexico 5	1282	1597	0.7	6.4
16	5244	Lagos White	1189	1189	1.5	3.4
38	5289	Trinidad Bulk	922	922	1.0	3.5
2	5145	Tsotsuru	1681		—	—
3	5129	Ogbomosho	1488		1.2	4.3
4	5135	Adaduokron	1461		1.5	3.7
5	5082	Asoso Aburo	1428		1.4	2.4
6	6123	Gbibli	1408		1.1	4.2
7	6031	Kupua	1325		0.9	4.0
8	6107	Tsolo Maize	1322		1.3	4.1
8	6209	Bombali 2	1322		1.1	2.6
10	5131	Kpaglio	1282		1.4	2.5
10	6126	Parago	1282		1.3	3.7
13	5092	Ondo 2	1270		1.4	2.5
14	5142	Aburo Burobo	1261		1.0	5.4
15	5084	Gbitigu	1241		1.6	2.0
17	6115	Epe 2	1184		1.2	3.9
18	5063	Owo 1	1182		1.3	2.7
19	6111	Brazilian Maize	1145		0.7	2.5
20	5098	Okitipupa 2	1135		1.4	1.9
21	6127	Asafo white	1130		1.4	3.0
22	5137	Adaduokron 2	1114		1.4	3.3
23	5123	Kpeli 2	1112		2.6	4.8

ACQUISITION TRIAL AT ILORA—*Continued.*

RANK	PROGENY	VARIETY	YIELD	GROUP MEAN	RUST	LEAF BLIGHTS
24	6110	Kankan	1104		1.1	4.6
25	5146	Ebsey 1	1077		1.1	5.1
26	5053	Dzenuebli	1063		1.4	2.5
27	6120	Delta 1	1041		1.1	2.4
28	5074	Owo 3	1023		1.1	2.9
29	5128	Okitipupa 3	1020		1.4	2.3
30	6040	Bonsamboro	1020		1.6	3.5
30	5169	Asramienue	986		1.3	3.6
32	6086	Kawanda 2	984		1.3	5.2
33	5088	Ekiti 4	962		1.2	1.9
34	5064	Ikorodu 2	961		1.0	2.8
35	5995	Aditsibli	945		1.9	3.1
36	5047	Oletietobli	943		1.6	3.0
37	5997	Chenchenbi	939		1.6	6.2
39	5042	Ilaro 2	893		1.2	4.2
40	6112	Asram Abiesa	890		1.4	6.2
41	5048	Ikokia	888		1.8	2.5
42	5132	Ikeja 3	880		1.3	4.1
43	5139	Ayigbe-Able	868		1.5	3.0
44	6117	Konkonkran	853		1.0	2.3
45	5140	Ilesha 1	820		1.4	3.9
46	5069	Oloto 10	814		1.6	—
47	5143	Ilesha 3	810		1.4	2.6
48	5959	Keta 12	806		2.4	5.8
49	5097	Bamenda Corn	791		1.1	4.7
50	5131	Ebsey 2	791		1.0	4.7
51	5144	Ikeja 2	790		0.9	2.4
52	5147	Okitipupa 1	787		0.8	1.8
53	6129	Koya 5	778		0.6	1.7
54	5073	Ekiti 1	731		1.2	3.9
55	6108	Ngesang	726		1.5	3.4
56	6038	Soft Maize	711		1.7	5.1
57	5525	Chariga	685		1.7	6.4
58	6100	Ikorodu 2	642		1.1	2.4
59	5062	Ijebu 4	620		1.5	2.6
60	5960	Koya 6	616		2.2	3.4
61	6036	Worbli	613		1.5	2.4
62	6034	Nonobli	590		2.1	4.1
63	5964	Badagry 2	527		2.4	5.0
64	5994	Ekel 1	527		1.2	3.4
65	6098	Dakpa	466		1.4	3.8
66	5971	Kajabli	408		1.2	9.3
67	5961	Tamale 2	405		1.6	9.1
68	5996	Ifunyintedo	306		1.8	3.8
69	5969	Gbarigu Dagia	274		1.5	7.4
70	5966	Nyia	235		1.8	6.0
71	5524	Bongo	195		1.7	15.0
72	5963	Laura	93	907	3.1	7.4

Yields in LB per acre

Coefficient of variation: 31.3%

L.S.D. 5%: 664 LB per acre.

TABLE 38

TRIAL REFERENCE 57-2-13 IBADAN
4 × 13 YOU DEN SQUARE
ACQUISITION TRIAL AT IBADAN.

RANK	PROGENY	VARIETY	YIELD	GROUP MEAN	RUST	MATURITY TIME
1	6219	Lagos White	3203	3203	0.9	103
2	3888	Mexico 5	2599		0.7	100
9	3889	Mexico 1	1131	1865	0.4	102
3	5727	Kansas Indiana K45	2009		1.1	91
4	5731	Kansas Indiana K2	1924		0.9	93
5	5724	Kansas Indiana K44	1630		1.1	93
6	5732	Kansas Indiana K43	1622		1.2	91
7	5723	Kansas Indiana K6	1287		1.0	94
8	5725	Kansas Indiana K50	1131		1.2	93
10	5729	Kansas Indiana K42	1046		1.2	94
11	5728	Kansas Indiana K18	1002		0.9	91
12	5730	Kansas Indiana K3	899		1.0	95
13	5726	Kansas Indiana K5	761	1331	0.7	99

Yields in LB per acre
Coefficient of variation: 23.2%
L.S.D. 5%: 793 LB per acre.

TABLE 39

TRIAL REFERENCE 57-3-1 ILORA
7 × 8 RECTANGULAR LATTICE
IMPROVEMENT TRIAL AT ILORA.

RANK	PROGENY	VARIETY	YIELD	GROUP MEAN	RUST	TASSELLING TIME
4	5512	Mexico 5	3555		1.6	66
10	5513	Mexico 7	3198		1.2	57
27	5511	Mexico 1	2714	3156	1.4	—
1	5700-44	Trinidad Bulk Ear No. 44	4120		1.3	63
2	5700-37	Trinidad Bulk Ear No. 37	3716		1.1	61
3	5700-45	Trinidad Bulk Ear No. 45	3590		1.3	56
5	5700- 8	Trinidad Bulk Ear No. 8	3469		1.1	56
6	5700- 3	Trinidad Bulk Ear No. 3	3359		1.3	66
7	5700-12	Trinidad Bulk Ear No. 12	3353		1.2	56
8	5700-33	Trinidad Bulk Ear No. 33	3330		1.2	66
9	5700- 2	Trinidad Bulk Ear No. 2	3227		1.3	61
11	5700-47	Trinidad Bulk Ear No. 47	3192		1.5	56
12	5700-24	Trinidad Bulk Ear No. 24	3175		1.2	61
13	5700-46	Trinidad Bulk Ear No. 46	3134		1.5	60
13	5700-31	Trinidad Bulk Ear No. 31	3134		1.1	66
15	5700-41	Trinidad Bulk Ear No. 41	3111		1.3	61

IMPROVEMENT TRIAL AT ILORA—*Continued.*

RANK	PROGENY	VARIETY	YIELD	GROUP MEAN	RUST	TASSELLING TIME
16	5700- 6	Trinidad Bulk Ear No. 6	3042		1.2	56
17	5700- 4	Trinidad Bulk Ear No. 4	2973		1.3	60
19	5700-38	Trinidad Bulk Ear No. 38	2846		1.4	60
20	5700- 7	Trinidad Bulk Ear No. 7	2829		1.1	60
21	5700-15	Trinidad Bulk Ear No. 15	2812		1.2	55
21	5700-35	Trinidad Bulk Ear No. 35	2812		1.5	57
23	5700-25	Trinidad Bulk Ear No. 25	2800		1.4	56
24	5700-20	Trinidad Bulk Ear No. 20	2789		1.1	57
25	5700- 9	Trinidad Bulk Ear No. 9	2737		1.2	61
26	5700-27	Trinidad Bulk Ear No. 27	2720		1.3	—
28	5700-32	Trinidad Bulk Ear No. 32	2702		1.3	56
29	5700-21	Trinidad Bulk Ear No. 21	2685		1.3	57
30	5700-49	Trinidad Bulk Ear No. 49	2674		1.4	66
31	5700-30	Trinidad Bulk Ear No. 30	2668		1.2	66
31	5700-11	Trinidad Bulk Ear No. 11	2668		1.2	56
33	5700-17	Trinidad Bulk Ear No. 17	2662		1.4	60
34	5700-26	Trinidad Bulk Ear No. 26	2639		1.2	59
34	5700- 1	Trinidad Bulk Ear No. 1	2639		1.2	64
36	5700-19	Trinidad Bulk Ear No. 19	2616		1.2	56
37	5700-42	Trinidad Bulk Ear No. 42	2593		1.2	63
38	5700-34	Trinidad Bulk Ear No. 34	2570		1.3	56
39	5700-28	Trinidad Bulk Ear No. 28	2408		1.2	59
40	5700-18	Trinidad Bulk Ear No. 18	2397		1.2	63
41	5700-16	Trinidad Bulk Ear No. 16	2362		1.1	59
42	5700-23	Trinidad Bulk Ear No. 23	2357		1.5	59
43	5700-50	Trinidad Bulk Ear No. 50	2351		1.3	57
44	5700-39	Trinidad Bulk Ear No. 39	2345		1.2	59
45	5700-36	Trinidad Bulk Ear No. 36	2316		1.3	56
46	5700- 5	Trinidad Bulk Ear No. 5	2305		1.2	60
47	5700-10	Trinidad Bulk Ear No. 10	2213		1.1	62
49	5700-14	Trinidad Bulk Ear No. 14	2120		1.2	57
50	5700-43	Trinidad Bulk Ear No. 43	2120		1.2	57
51	5700-22	Trinidad Bulk Ear No. 22	2109		1.2	56
52	5700-48	Trinidad Bulk Ear No. 48	2074		1.2	60
53	5700-29	Trinidad Bulk Ear No. 29	2063		1.4	60
54	5700-13	Trinidad Bulk Ear No. 13	1994		1.2	56
56	5700-40	Trinidad Bulk Ear No. 40	1659	2688	1.2	60
18	3894	Trinidad Bulk	2892		1.2	57
55	5516	Haiti Bulk	1775	2334	1.3	64
48	5514	Sicaragua	2161	2161	1.3	57

Yields in LB per acre.
Coefficient of variation : 27.9 %
L.S.D. 5%: 1221 LB per acre.

TABLE 40

TRIAL REFERENCE 57-3-2 IBADAN
7×8 RECTANGULAR LATTICE
IMPROVEMENT TRIAL AT IBADAN.

RANK	PROGENY	VARIETY	YIELD	GROUP MEAN	RUST	TASSELLING TIME
1	5700-24	Trinidad Bulk Ear No. 24	1592		3.1	59
2	5700-10	Trinidad Bulk Ear No. 10	1575		2.0	60
3	5700- 1	Trinidad Bulk Ear No. 1	1546		3.1	59
4	5700-31	Trinidad Bulk Ear No. 31	1521		2.2	60
5	5700- 8	Trinidad Bulk Ear No. 8	1478		2.5	60
6	5700-12	Trinidad Bulk Ear No. 12	1467		2.4	59
7	5700-20	Trinidad Bulk Ear No. 20	1429		2.1	61
8	5700- 9	Trinidad Bulk Ear No. 9	1409		2.0	61
9	5700-38	Trinidad Bulk Ear No. 38	1327		3.0	59
11	5700-33	Trinidad Bulk Ear No. 33	1317		2.0	60
12	5700-29	Trinidad Bulk Ear No. 29	1314		2.6	61
13	5700-25	Trinidad Bulk Ear No. 25	1292		2.8	61
14	5700-37	Trinidad Bulk Ear No. 37	1275		1.9	62
15	5700-49	Trinidad Bulk Ear No. 49	1270		2.9	59
16	5700-21	Trinidad Bulk Ear No. 21	1242		2.7	63
17	5700-32	Trinidad Bulk Ear No. 32	1234		2.5	59
17	5700-41	Trinidad Bulk Ear No. 41	1234		3.2	59
19	5700-18	Trinidad Bulk Ear No. 18	1231		3.0	60
20	5700-22	Trinidad Bulk Ear No. 22	1223		2.6	59
21	5700- 6	Trinidad Bulk Ear No. 6	1221		2.1	59
22	5700-39	Trinidad Bulk Ear No. 39	1217		2.4	59
23	5700- 4	Trinidad Bulk Ear No. 4	1215		2.0	63
24	5700-17	Trinidad Bulk Ear No. 17	1212		3.3	60
25	5700- 5	Trinidad Bulk Ear No. 5	1211		2.7	59
26	5700- 2	Trinidad Bulk Ear No. 2	1205		2.8	61
26	5700-16	Trinidad Bulk Ear No. 16	1205		1.9	61
28	5700-42	Trinidad Bulk Ear No. 42	1204		2.2	59
28	5700-11	Trinidad Bulk Ear No. 11	1204		3.1	61
30	5700- 3	Trinidad Bulk Ear No. 3	1194		2.4	61
32	5700-19	Trinidad Bulk Ear No. 19	1186		2.1	62
33	5700-15	Trinidad Bulk Ear No. 15	1184		2.2	60
34	5700-28	Trinidad Bulk Ear No. 28	1183		2.5	59
35	5700-47	Trinidad Bulk Ear No. 47	1176		1.8	60
36	5700-30	Trinidad Bulk Ear No. 30	1168		2.3	59
37	5700-44	Trinidad Bulk Ear No. 44	1136		2.5	59
38	5700-23	Trinidad Bulk Ear No. 23	1130		2.6	63
39	5700-27	Trinidad Bulk Ear No. 27	1105		3.2	59
40	5700-34	Trinidad Bulk Ear No. 34	1102		2.8	59
41	5700-50	Trinidad Bulk Ear No. 50	1090		2.6	60
42	5700-36	Trinidad Bulk Ear No. 36	1068		2.9	60
43	5700-45	Trinidad Bulk Ear No. 45	1055		2.4	61
44	5700-26	Trinidad Bulk Ear No. 26	1054		3.0	61
45	5700-13	Trinidad Bulk Ear No. 13	1046		3.0	61
46	5700-14	Trinidad Bulk Ear No. 14	1037		2.4	62
48	5700-40	Trinidad Bulk Ear No. 40	974		2.5	61
49	5700-46	Trinidad Bulk Ear No. 46	974		2.6	61
50	5700-48	Trinidad Bulk Ear No. 48	971		2.3	61

IMPROVEMENT TRIAL AT IBADAN—*Continued.*

RANK	PROGENY	VARIETY	YIELD	GROUP MEAN	RUST	TASSELLING TIME
51	5700-7	Trinidad Bulk Ear No. 7	910		2.6	60
53	5700-43	Trinidad Bulk Ear No. 43	800		2.4	59
55	5700-35	Trinidad Bulk Ear No. 35	686	1240	2.7	63
31	5516	Haiti Bulk	1192	1192	2.5	60
47	3894	Trinidad Bulk	1028		2.4	61
10	5513	Mexico 7	1324		2.5	60
52	5512	Mexico 5	881		2.8	61
56	5511	Mexico 1	437	881	2.0	69
54	5514	Sicaragua	756	756	1.3	61

Yields in LB per acre
Coefficient of variation : 21.4%
L.S.D. 5% : 408 LB per acre.

TABLE 41

TRIAL REFERENCE 57-5-1 IBADAN
4 × 7 YOU DEN SQUARE
STEMBORER SCORING TRIAL AT IBADAN.

RANK	PROGENY	VARIETY	PERCENTAGE OF BORED PLANTS AT HARVESTING TIME
1	3661	Minn. A42.645 × WAMRU 2	84
2	5478	Minn. A294 × WAMRU 2 ²	56
3	5473	Minn. A404 ³ × WAMRU 2	48
4	5447	Minn. A404 ² × WAMRU 2	48
5	—	Local	45
6	5484	Minn. A404 × WAMRU 2 ²	43
7	5446	Minn. A42.645 ² × WAMRU 2	36
Difference required at P = .05			3.3
Difference required at P = .01			6.0

4. NOTES

4.1 Trials on selected varieties.

A series of trials was run on a number of preliminary chosen varieties to test their yielding performances under various environmental conditions. These trials are known as the "cooperative" trials as they were carried out in co-operation with the various departments of agriculture. These were planned for 1957 and 1958. The results of the 1957 series are given. The error variances of the trials show a significant heterogeneity and implicate therefore their combined analysis. A preliminary conclusion seems to be that varieties tested in the lowland rainforest zone tend to maintain their ranks on the basis of their yielding performance. The opposite is true for centres within the Savannah zones.

4.2 Acquisition Trials.

A comparison of yield figures for a number of varieties demands a consideration of basic differences, such as the length of the time to maturity. The longer maturing varieties tend to be taller and higher yielding (Stanton 1953). However, within each maturity group a large variability exists.

4.2.1 Caribbean Collection.

A great part of the collection of maize varieties from the Caribbean isles was tested for yielding performance at Benin, and at Ilora. The management of the trial at Benin (57-1-2) was excellent and resulted in a high yield level, although a large variation was observed. The yields ranged from 426 to 3924 lb/acre. The mean yields for the groups of varieties from Trinidad and San Domingo were highest. This was noticed already in former trials at other centres (Anon 1957 a,b).

The trial at Ilora (57-2-4) was less successful, mainly because the weeds could not be controlled during the first five weeks of the growing period. It was again observed that the yellow flinty varieties from Trinidad showed a good performance even under such adverse growing conditions.

The results of trials on the Trinidad varieties obtained in 1954, 1955 and 1956 (Anon 1957a and 1957b) can be studied in conjunction with the present results. It then occurs, that the numbers 149, 153, 155, 165 of the Trinidad series could be accepted as high yielding varieties, with Br. 155 Trinidad far ahead of the others. The numbers 147 and 154 gave good performance in Savannah areas and the numbers 156 and 159 did better in the rainforest. Number 162 performed very well at Benin, but has not been tested elsewhere.

The varieties from Martinique, brown flinty varieties, mature rather early at Ibadan. Their maturity time is approximately 75 days, whereas the Mexicans reach their maturity not before 100 to 110 days. The Martinique varieties were tested in trials 57-1-2, 57-2-4, 57-2-10 and 57-2-11. Their results are different in the few centres they were grown. A comparison of the present results with the results of former trials (Anon. 1957b) indicate that Br. 143 Martinique and Br. 146 Martinique seem to have the best general performance within this group of short maturing, lower yielding varieties.

4.2.2 Central American Collection.

The trials on the yielding performance of 47 Costa Rica varieties acquired from the East African Agriculture and Forestry Research Organisation, were continued in 1957 at Ibadan (57-2-3 and 57-2-8) and at Ilora (57-2-4 and 57-2-9). This series of trials will be completed during the 1958 growing seasons.

However, the available data do point immediately to the high yielding capacity of EAFRO 231, a Guatemalan selection from the variety Rocamex 520—C, which is also the source variety for Mexico 5.

4.2.3 West African Collection.

A series of 68 West African varieties was sown in a yield trial during the second season at Ilora (57-2-12). The yields were on a rather low level.

The improved local variety was superseded by a number of the West African Maize varieties, of which only the varieties Tsotsuru and Ogbomosho, deserve mentioning (table 42).

TABLE 42

PERFORMANCE AND ORIGIN OF THREE
WEST AFRICAN VARIETIES.

VARIETY	YIELDS PER ACRE LB DRY GRAIN	ORIGIN
Tsotsuru	1681	Ghana Coastal Scrub bush (Guinea Savannah)
Ogbomosho	1488	Nigeria lowland rainforest
Improved Local	1189	Nigeria lowland rainforest

Already in 1956 these two varieties proved to be better yielders than the local variety. However the impression is that the locals in general do not attain the yield level of a number of introduced varieties.

4.2.4 U.S.A.—varieties.

Ten white flinty Kansas—Indiana varieties are not likely to be of much advantage in the rainforest as their shorter time to maturity does not measure up to the higher yielding capacity of longer maturing varieties. These varieties will have to be tested again in the Savannah area.

Sixteen yellow flinty varieties from Florida, are not considered to be useful in the wet rain forest; they still have to be tested in more northerly areas.

4.3 Improvement Trials.

A pilot scheme on methods for the improvement of varieties was started on the variety Trinidad Bulk. The details of this approach are laid down in the Review of Research for 1955 to 1957 (Anon 1958). Both trials 57-3-1 and 57-3-2 were run to evaluate the combining ability of ear selections.

4.4 Stemborer Trial.

Trial 57-5-1 was designed for the detection of resistance against stemborers. The conclusion achieved was that the inbred line Minnesota A42.645 carries probably recessive gene(s) for resistance. (van Eijnatten, 1958)

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